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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/757,190      | 01/14/2004  | Michael Edward Hauger | MOT-D3203           | 3592             |

24375 7590 03/15/2007  
VOLPE AND KOENIG, P.C.  
DEPT. MOT  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

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| EXAMINER |
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JONES, STEPHEN E

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2817

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/15/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/757,190 | <b>Applicant(s)</b><br>HAUGER, MICHAEL EDWARD |  |
|                              | <b>Examiner</b><br>Stephen E. Jones  | <b>Art Unit</b><br>2817                       |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-13, 15-19, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 4, 14 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/14/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-10, 12-13, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton.

Sutton teaches an RF equalizer (12) including: a thermistor (46) provides automatic temperature compensation; a variable resistor (30) is coupled to a variable capacitor (24 and 36) (Claim 2); the arrangement of resistors (e.g. 32, 34, 38, 40) can be considered a limiting circuit, especially since these elements are arranged similarly to the present invention and are the same as the structure as required in claims 1-3 and 10; a parallel LC resonant circuit (i.e. a tuning circuit) is formed by a capacitor and inductor ( 50, 52) connected between ground and the thermistor (Claims 6-7, 12-13); the device can be for 100MHz (e.g. see Col. 2, line 69) (Claims 8,15); the device provides adjustment in the range of 2 dB (e.g. see Col. 4, and Figs. 2-3) (Claims 9 and 16).

However, Sutton does not explicitly teach the type of variable elements and that they are manually adjustable and the circuit functions or is used in a particular claimed manner.

Because the reference is silent as to the types of variable elements, one of ordinary skill in the art would have been motivated to use any known adjustable capacitors and resistors such as well-known manually adjustable capacitors and resistors for providing the appropriate tuning of the equalizer circuit. Furthermore, as an obvious consequence of the Sutton circuit being structurally the same as the present claimed structure, obviously it would function equivalently (i.e. variable tilt, limiting, manual alignment, etc.) and would also be capable of being used as detailed in the claims.

***Claim Rejections - 35 USC § 103***

3. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Bullington.

Sutton teaches an equalizer as described above, but does not explicitly teach that the thermistor has a negative temperature coefficient (NTC) (alternative to a positive temperature coefficient).

Bullington provides the general teaching of providing a thermistor having a NTC to regulate/equalize for a transmission line.

It would have been considered obvious to one of ordinary skill in the art to have selected the thermistor in the Sutton equalizer circuit to have been an NTC thermistor such as taught by Bullington, because it would have been a mere selection of a well-known thermistor type and would have provided the advantageous benefit of reducing variations in the attenuation of the transmission line system resulting from temperature changes due largely from resistance change (e.g. see Bullington page 2, Col. 1, lines

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55-60), thereby suggesting the obviousness of such a modification. Furthermore, as an obvious consequence of the Sutton/Bullington combination circuit being structurally the same as the present claimed structure, obviously it would function equivalently (i.e. variable tilt, etc.)

4. Claims 17-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Bullington.

Sutton teaches an RF equalizer (12) including: a thermistor (46) provides automatic temperature compensation; a variable resistor (30) is coupled to a variable capacitor (24 and 36); the arrangement of resistors (e.g. 32, 34, 38, 40) can be considered a limiting circuit, especially since these elements are arranged similarly to the present invention and are the same as the structure as required in claim 19; a parallel LC resonant circuit (i.e. a tuning circuit) is formed by a capacitor and inductor (50, 52) connected between ground and the thermistor (Claim 18); the device can be for 100MHz (e.g. see Col. 2, line 69) (Claim 21); the device provides adjustment in the range of 2 dB (e.g. see Col. 4, and Figs. 2-3) (Claim 22).

However, Sutton does not explicitly teach the type of variable elements and that they are manually adjustable and the circuit functions or is used in a particular claimed manner, or that the thermistor has a negative temperature coefficient (NTC) (alternative to a positive temperature coefficient).

Bullington provides the general teaching of providing a thermistor having a NTC to regulate/equalize for a transmission line.

It would have been considered obvious to one of ordinary skill in the art to have selected the thermistor in the Sutton equalizer circuit to have been an NTC thermistor such as taught by Bullington, because it would have been a mere selection of a well-known thermistor type and would have provided the advantageous benefit of reducing variations in the attenuation of the transmission line system resulting from temperature changes due largely from resistance change (e.g. see Bullington page 2, Col. 1, lines 55-60), thereby suggesting the obviousness of such a modification. Furthermore, as an obvious consequence of the Sutton/Bullington combination circuit being structurally the same as the present claimed structure, obviously it would function equivalently (i.e. variable tilt, etc.)

Also, because the reference is silent as to the types of variable elements, one of ordinary skill in the art would have been motivated to use any known adjustable capacitors and resistors such as well-known manually adjustable capacitors and resistors for providing the appropriate tuning of the equalizer circuit. Furthermore, as an obvious consequence of the Sutton/Bullington combination circuit being structurally the same as the present claimed structure, obviously it would function equivalently (i.e. variable tilt, limiting, manual alignment, etc.) and would also be capable of being used as detailed in the claims.

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***Allowable Subject Matter***

5. Claims 4, 14, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

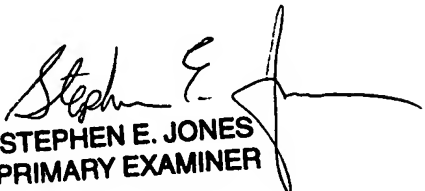
van der Meijs teaches an equalizer having correction of temperature attenuation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEJ

  
STEPHEN E. JONES  
PRIMARY EXAMINER